

## **REMARKS**

### **The Rejection Under 35 USC § 112**

The Office Action alleges that claim 18 fails to comply with the written description requirement because of the recitation of no chemical bond of the LCST and/or UCST polymer with the effect pigments.

The Office Action points to the specification stating that

Preference is given to the use of LCST or UCST polymers containing functional groups which undergo strong interactions and/or form chemical bonds with the effect pigment and the application medium, such as, for example, the coating matrix.

To one of ordinary skill in the art, the text pointed to by the Office Action clearly conveys that without functional groups which form chemical bonds with the effect pigments, no chemical bonds would form with the effect pigments. Moreover, this language also clearly conveys that the application is not limited to LCST and/or UCST polymers of the kind which are provided with functional groups of the kind discussed above because such embodiments are described as merely preferred. Thus, there is no basis for the rejection.

Moreover, applicants clearly describe in the paragraph spanning pages 5 and 6 of the application that

The effect pigment is preferably mixed with an immobilisable LCST and/or UCST polymer or polymer mixture, if necessary in the presence of a solvent. The LCST polymer is dissolved at a temperature below the LCST, while the UCST polymer is dissolved above the UCST. In general, the LCST temperature is 0.5-90°C, preferably 35-80°C, while the UCST temperature is 5-90°C, in particular 35-60°C. If desired, additives are then added. The temperature is subsequently generally increased by about 5°C above the LCST or lowered by about 5°C below the UCST, whereupon the polymer precipitates and deposits on the particle surface. Finally, the immobilisation is carried out in the form of crosslinking of the polymer on the particle surface, with the polymer being irreversibly immobilised on the particle surface. The immobilisation can be carried out, for example, by means of free radicals, cationically, anionically or by a condensation reaction. The LCST or UCST polymers are preferably cross-linked by means of free radicals or by a condensation reaction.

In the above, applicants clearly describe the preparation of the claimed surface-

modified effect pigments where precipitation of the LCST and/or UCST polymer occurs where immobilization of the polymer on the surface is achieved by cross-linking. In said embodiment, no discussion of bonding to the effect pigments is discussed.

Moreover, one of ordinary skill in the art knows and knew at the time of filing that LCST and/or UCST polymers envelope pigment particles and that they do not, without having been provided with functional groups, form chemical bonds with the pigments, which knowledge of one of ordinary skill in the art is explicitly recognized in the application. See the reference to WO 01/60926 at the bottom of page 4 of the application, which corresponds to US 6,686,046, which is used in a rejection in the Office Action. US '046 teaches LCST polymers which envelope pigment particles (see column 2, lines 25-27), which can be immobilized by crosslinking or by fixing to the substrate surface by modifying the substrate or polymer so that chemical bonds are formed between the individual polymer chains and/or the substrate and the polymer (see column 2, lines 42-48), describes alternate types of LCST and substrate interactions besides chemical bonding, e.g., ionic, polar, etc., (see column 2, lines 55-60) and describes the adsorption of LCST to pigment particles (see figure 1 and column 4, lines 45-46).

Clearly, one of ordinary skill in the art would understand applicants' disclosure to describe the presently claimed invention among other embodiments, e.g., one where chemical bonding is present between the effect pigments and the LCST and/or UCST polymer. As such, one of ordinary skill in the art would have understood that applicants were at the time of filing in possession of the claimed invention.

Applicants also bring to the attention of the USPTO that if alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977). See also MPEP 2173.05(i). The specification clearly described immobilization by various methods, e.g., cross-linking, chemical bonding of the polymer to the effect pigments, etc. Thus, under controlling precedent, applicants can exclude any one of the positively recited alternates, including chemical bonding to the effect pigments.

Reconsideration is respectfully solicited.

#### **Obviousness-Type Double Patenting Rejection**

A terminal disclaimer is filed herewith rendering this rejection moot.

### **The Rejection Under 35 USC § 103**

The Office Action alleges that the claims are obvious over Glausch in view of Schauer.

The previous arguments provided in the last reply are incorporated herein by reference.

The Office Action in the response to arguments section alleges that the claims in their entirety do not recite the lack of chemical bonding. Claim 18 recites that “the LCST and/or UCST polymer does not form a chemical bond with the effect pigments,” yet it was nevertheless rejected. Moreover, the remaining claims also recite that the pigments are “sheathed” with one or more layers of immobilized LCST and/or UCST polymer, where the meaning of “sheathed” was extensively discussed in the last reply. No reason or explanation is provided why then would the prior art’s (Glausch’s) chemical bonding between the polymer and the surface upon which it is coated is not excluded or how a reference explicitly directed to such coated pigments provides relevant material to the presently claimed invention. Clarification is respectfully solicited.

If the Office Action alleges that the term “sheathed” (see claims other than claim 18) or “does not form a chemical bond” (see claim 18) somehow does not exclude the possibility of some chemical bonds between the polymer and the surface of the effect pigments, then applicants point to *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983), which is highly relevant to such an allegation. In *Marosi*, applicants chose to distinguish their invention from the prior art with the limitation “essentially free of alkali metal,” while some amount of alkali metal was present. The USPTO wanted a precise cutoff for the amount of alkali metal in the claim(s). The Federal Circuit held that “insofar as it requires appellants to specify a particular number as the cutoff between their invention and the prior art, the PTO's position is impractical. Appellants’ invention does not reside in such a number.” Instead the court held that claims are not to be read in vacuum, and limitations in them are to be interpreted in light of specification, whereby one of ordinary skill in the art reading the specification would be able to determine the amount or draw the line between unavoidable impurities (comparable here to unavoidable chemical bonds between the polymer and the surface of the effect pigments, if any) and essential ingredients. As in *Marosi*, the claimed invention here is directed to an invention clearly distinguishable from that of Glausch, which is directed to pigments where chemical bonding is present between the surface coating and that pigments’ surface.

The Office Action also alleges that the prior art's impurities are not expressly excluded from the claims. The claims of the application are now all formulated as product by process claims. The process recited in the claims excludes the impurities of the prior art products which are a result of the prior art's processes of preparation. See extensive discussion on this issue in the last reply.

The Office Action also alleges that the motivation to combine the prior art references is their disclosure of coating particles and that both Schauer and Glausch recite titanium and iron oxide.

However, one of ordinary skill in the art would not consider these references in combination in view of their context. They both teach completely different types of pigments and completely different types of coatings. This is not a case where there is an overlap in either one of these features. Nothing in either reference teaches or suggests that the pigment types of these references are interchangeable, or that the coating types of these references are interchangeable. The broad disclosure of coated particles, which are completely different from each other in the respective references, is too loose of a connection to provide adequate reason under the law for one of ordinary skill in the art to interchange the elements of these references.

Moreover, as discussed in the last reply, the disclosures of titanium and iron oxides in these references also must be considered in context. Schauer discloses pigments, where among the disclosed choices various metal oxides are present as pigments. Glausch teaches pearl luster pigments based on platelet shaped particles which are coated with various metal oxides. In Schauer the metal oxides are the pigments, whereas in Glausch the metal oxides are a coating on a substrate. The two types of pigments in these references are distinct and are not comparable pigments at all regardless of the presence of the recited metal oxides. See the more extensive discussion in the last reply on this issue. The mere presence of the same chemical elements in these pigments is not an adequate reason for the combination of these references. There are thousands to millions of products which contain these chemical elements, yet there is no rationale adequate under patent law for the combination of all such thousands to millions of products.

Reconsideration is respectfully solicited.

The claims are also rejected over Winter in view of Glausch.

The alleged reason for the combination of these references is that both references

“disclose common components (polysiloxanes).” This reasoning ignores the teachings of these references and the context of the disclosures regarding polysiloxanes. These references have an element in common, but in completely different context/environments. Merely having a common element in two references (while ignoring everything else the two references teach or suggest) is not a sufficient reason under patent law for an alleged combination. Here, one reference merely lists polysiloxanes as a possible polymer that could be stabilized by a compound of said reference, and the other reference teaches as a pigment which could be coated with polysiloxanes. One of ordinary skill in the art would and could not have achieved the presently claimed invention from the disclosures of these references even if combined. See the extensive discussion in the last reply on this issue, which is incorporated herein by reference.

Applicants in the last reply explicitly requested the withdrawal of this untenable rejection or a more thorough explanation for how and why one of ordinary skill in the art would or even could piece the presently claimed invention together from the disclosures of these references. Since the rejection was maintained and no such explanation was provided, applicants respectfully solicit the same again.

Reconsideration is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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